

REMARKS

The specification is revised to correct minor typographical errors, and is revised at page 11 to provide antecedent basis for certain wording appearing in Claim 12. The independent claims are revised to define novel and patentable subject matter over the art of record, and the preambles of several dependent claims are revised for improved clarity. Claims 1-23 remain, with no claim previously allowed.

The objection to the specification is noted. In response to that objection, page 11 is revised to include the recitation appearing in Claim 12, line 4. This revision does not add new matter to the application.

The objections to the claims are noted. In response thereto, Claims 2 and 10 are revised by substituting the definite article --the-- for the “telephone keypad”.

Concerning the objections to “a digital format to an audio format” in Claims 12-14, the Applicant respectfully traverses those objections. Those claims describe the operation that occurs when the output from the speech recognition engine is played back to the user (please refer to the paragraph bridging pages 11 and 12 of the specification). The output from the speech recognition engine is, of course, in digital form (page 11, lines 20-24) for processing. In order to play the output from the speech recognition engine back to the user, that output must be converted to an audio format to be intelligible to the user. Accordingly, the existing wording of Claims 12-14, namely, “converting...from a digital format to an audio format”, is accurate and no correction is required.

Claim 15 is revised to recite the definite article --the-- referring to the DTMF key tone.

Turning to art-related issues, Claims 1, 15-17, and 23 are rejected as anticipated by *Brotman* (US 5,917,890). The Applicant respectfully traverses that rejection, as possibly applied to the amended claims.

Brotman describes an automated call processing system requiring the user to speak (“utter”) each character, one character at the time. The system captures that spoken character, presents what it has determined as the first candidate character to the user, and, if that candidate character is correct, then prompts the user to speak the next character, and so on (column 3, lines 44-51). *Brotman* considers it an advantage of his system that

“the user utters only the desired character, and not additional information, when the speech recognition portion of the automated system is capable of correctly captioning the character” (column 3, lines 63-66).

Embodiments of the present invention allow the user to speak an entire word, in contrast with the one-character-at-the-time approach favored by *Brotman*. Please see page 10, lines 21-23 and page 11-lines 18-20 of the Applicant’s specification, describing an embodiment where the user maybe prompted to spell the user’s last name by speaking alphabetic characters or by entering characters using a telephone keypad. The speech recognition engine converts the analogue voice or speech input from the user to a digital data representation of the user’s input, and then attempts to recognize the spoken alphabetic characters entered by the user. That embodiment then outputs the recognized characters to the user in audio format, and prompts the user to verify that the output from the speech recognition engine is correct. The example given in the paragraph bridging pages 11 and 12 illustrates that the disclosed embodiment spells out the entire character set entered by the user, and then queries the user to verify that the output from the speech recognition engine is correct. If the user does not verify that output as correct, the method proceeds to take corrective action as described commencing at page 12, line 11.

Claim 1 is revised to recite a method embodiment comprising receiving a first spoken alphabetic character input comprising plural alphabetic characters from a user. That character input is passed through a speech recognition engine, where the character input is converted to a digital format and recognized. The method queries the user for verification that the recognized alphabetic character input is the same as the spoken input received from the user. If the recognized character input is not the same as the user’s spoken input, the method received from the user a DTMF input for each of the first spoken alphabetic characters received from the user. If one character string associated with the DTMF input received from the user matches a first spoken alphabetic character input received from the user, the method designates the character string associated with the DTMF input as a correct alphabetic character input.

Comparing the *Brotman* with the embodiment of the present invention as recited in Claim 1, *Brotman* requires one-at-a-time spoken input of each character. The embodiment of Claim 1, however, receives and then processes spoken alphabetic

character input comprising plural alphabetic characters. For at least that reason, Claim 1 and the claims depending thereon are novel over *Brotman*.

Independent Claim 23 also now recites “receiving a first spoken alphabetic character input comprising plural spoken alphabetic characters from a user”. That spoken character input is passed through a speech recognition engine, and the user is queried to verify that the recognized character input is the same as the first spoken character input received from the user. According, for the reasons discussed above with respect to Claim 1, Claim 23 defines a method that is novel over *Brotman*.

Dependent Claim 15 is revised to point out that the method prompts the user for the DTMF key tone for each of the plural spoken alphabetic characters input by the user. This revision of Claim 15 thus further defines a novel method over the disclosure of *Brotman*.

Claims 2-14 are rejected as being unpatentable over *Brotman* as applied to Claim 1, in view of *Hartley* (US 6,910,012). *Hartley* is cited as disclosing the use of grammars to define a set of alphabetic characters, and the rejection asserts that it would have been obvious to one of ordinary skill to have modified *Brotman*'s speech recognition engine by a grammar according to *Hartley*. The Applicant respectfully traverses that rejection, as possibly applied to the claims depending from amended Claim 1.

Although *Hartley* and *Brotman* each pertain to speech recognition, those two references address very different applications and take different approaches. *Brotman* is concerned with recognizing alphabetic characters in an automated call processing environment, with applications such as call routing, directory assistance, and so on (column 1, lines 12-14). *Hartley*, however, deals with speech recognition in computer software application such as document preparation, data entry, and so on, wherein user productivity is important (column 1, lines 15-20). Accordingly, *Hartley* is concerned with *word* recognition and provides a grammar as a structure collection of words and phrases bound together by rules that define the set of utterances that can be recognized by the speech engine (column 6, lines 21-23). The grammar may include words and pseudo words offering phonetically similar alternatives, and translation rules can instruct the speech recognition system to translate each pseudo word into its corresponding parent word (column 6, lines 46-48).

The Applicant respectfully submits that one of ordinary skill would not have considered combining *Hartley* with *Brotman* in the manner proposed by the rejection, namely, by adding to *Brotman* a grammar as taught by *Hartley*. Because *Brotman* relies on one-character-at-the-time for capturing an uttered alphabetic character and then determining a candidate character for presenting to the user, a grammar of words or phrases such as *Hartley* teaches for phonetically-similar word alternatives would have no practical value in a *Brotman* application. *Brotman* can receive, evaluate, and present to the user only one candidate character at a time, and engrafting onto that process a speech recognition system according to *Hartley* would not have been considered a practical addition to *Brotman*. For that reason, the Applicant submits that Claims 2-14 are patentable over *Brotman* in view of *Hartley*.

Furthermore, dependent Claims 2-14 include the element of receiving spoken alphabetic character input comprising plural alphabetic characters. As previously discussed, *Brotman* teaches the advantage of a method in which the user utters only a desired character, and not additional information. Nothing in *Hartley*, which addresses applications of speech recognition different from those of *Brotman*, would have suggested that one of ordinary skill disregard those express teachings of *Brotman*. For that further reason, the Applicant submits that Claims 2-14 are patentable over *Brotman* in view of *Hartley*.

Claims 18-19 and 20-22 also are rejected as being unpatentable over *Brotman* in view of *Hartley*. The Applicant respectfully traverses those rejections for the reasons discussed above with regard to Claims 2-14.

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The foregoing is submitted as a complete response to the Office action identified above. The Applicant respectfully submits that the present application is in condition for allowance and solicits a notice to that effect.

Respectfully submitted,

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